

REMARKS

Interview

Applicants appreciate the Examiner's time and assistance at the interview on March 16, 2010.

Applicants will address each of the objections and rejections in the order in which they appear in the Office Action.

Claim Rejections - 35 USC §112, Second Paragraph

In the Office Action, Claims 1-6, 16-17 and 23-30 are rejected under 35 USC § 112, second paragraph as being indefinite. This rejection is respectfully traversed.

While Applicants traverse this rejection, in order to advance the prosecution of this application, Applicants are amending the claims to overcome this rejection.

Initially, Claims 1 and 2 are objected to for the phrase "an **insulating** surface." The Examiner states that it is not known if this is electrically, thermally, etc. Accordingly, Applicants are amending "an insulating surface" to "an electrically insulating surface". The field of the invention and the embodiments in the specification (for example, fabrication of a thin film transistor) make it clear that "insulating surface" should be read "electrically insulating surface." For example, page 3 lines 4-8 in the specification recite a "glass substrate" which is an electrically insulating substrate.

In order to address the other objections to the claims, Applicants are amending Claim 1 as follows (reference is to the lines in the claims in Amendment H filed 11/23/09 which are referenced in the objection; Applicants are addressing each of the specific objections in order as listed in the rejection):

Line 10, changing "a liquid composition" to "the liquid composition";

Line 8, changing “affinity for liquid” to “affinity for the liquid composition”;

Lines 11-12, changing “the first selected portion” to “the selected portion”

Lines 10-12, changing “applying a drop of a liquid composition to the selected portion irradiated with plasma from the second nozzle by drop discharging method, after irradiating the first selected portion with plasma,” to “applying the liquid composition to the selected portion by discharging a drop from the second nozzle by drop discharging method, after having irradiated the selected portion with the plasma,”;

Line 1, changing “comprising” to “comprising steps of”; and

Deleting the extra period.

In addition to similar amendments as made to Claim 1, Applicants are amending Claim 2 as follows:

Line 2, changing “affinity for a liquid” to “affinity for a liquid composition”; and

Last 2 lines, deleting the last “wherein” clause.

Applicants are amending Claim 23 to recite “a conductive pattern” and to distinguish “a mask pattern” from “a conductive pattern”. Claim 26 has been amended in a similar manner.

Applicants are also amending the clause in Claim 1 related to nozzles as follows: “~~horizontally moving positioning the glass substrate, a first nozzle and a second nozzle, which are the first and second nozzles being integrated, [[to]] so that the first nozzle and the second nozzle are in a region located above a selected portion of the liquid-repellent thin film with a spacing between the integrated first nozzle and second nozzle, and the thin film.~~” Support for this amendment can be

found, for example, in Figs 1, 2, 4, 5 and 7 and in the specification at page 6, line 19 to page 7, line 10. Similar amendments are being made to independent Claims 2, 23, and 26.

Applicants are further amending Claims 2 and 26 to recite "...to form a groove or a hole in the selected portion, or to modify the surface roughness of the selected portion..." This feature is supported by, for example, page 8, lines 20-25 in the specification. Applicants note that while the specification recites "surface asperity", the definition of "asperity" is roughness of surface. Therefore, Applicants are reciting "surface roughness" in the claim to improve clarity.

These amendments should overcome the §112, second paragraph rejection.

Objection To Disclosure

The Examiner objects to the disclosure for informalities therein, particularly the paragraph bridging pages 19-20 and the recital of the drop discharge means 13.

Therefore, Applicants propose to amend the specification in the paragraph bridging pages 19-20 to recite:

"After that, in order to improve the contact property, plasma of oxygen, nitrogen, helium or the like is irradiated by a plasma irradiation and drop discharge means 13 having plural plasma irradiating ports and composition discharge ports arrayed in a uniaxial direction..."

It is respectfully submitted that this amendment is consistent with the overall disclosure of the present application which describes integrated nozzles to perform plasma treatment and

composition discharge. See e.g. Fig. 7 in the present application.

Therefore, this amendment should overcome the objection to the disclosure.

Claim Rejection – 35 USC §112, first paragraph

The Examiner also rejects Claims 2, 5, 16-17 and 30 under 35 USC §112, first paragraph, as failing to comply with the written description requirement. In particular, the Examiner objects to the claim language “wherein the first pattern and the second pattern can be configured to join with each other or to separate each other” in Claim 2 as being new matter. This rejection is respectfully traversed.

While Applicants traverse this rejection, in order to advance the prosecution of this application, Applicants are deleting this phrase from the claim, without prejudice or disclaimer, which should overcome this rejection.

Accordingly, it is respectfully requested that this rejection be withdrawn.

Claim Rejections – 35 USC §103

The Examiner rejects Claims 1-6, 16-17 and 29-30 under 35 U.S.C. §103(a) as being unpatentable over Kiguchi et al. (US 6,599,582) and further in view of Di Dio (US 2004/0152329), optionally considering Lewis et al. (US 5,272,979), rejects Claims 1, 3-4, 6 and 29 under 35 U.S.C. §103(a) as being unpatentable over Kiguchi et al., optionally considering Lewis et al. (US 5,272,979), rejects Claims 23-28 under 35 USC §103(a) as being unpatentable over Kiguchi in view

of Di Dio, optionally considering Lewis, further in view of Yamazaki et al. (US 7,189,654). These rejections are respectfully traversed.

In particular, Kiguchi does not appear to disclose or suggest the claimed feature of “a first nozzle and a second nozzle, the first and second nozzles being integrated” as recited in the amended claims. While Kiguchi discusses moving “ink-jet systems” and “treatment means”, integration of those two apparatus is neither disclosed nor suggested in Kiguchi. For example, Figs. 19 and 20 in Kiguchi illustrate structures of ink-jet systems, but no combination with a treatment means is shown. In addition, the block diagrams of Figs 1-7 show ink-jet systems separated from treatment means.

The other cited references also do not appear to disclose or suggest this claimed feature.

In addition, amended Claims 2 and 26 both recite “to form a groove in the selected portion or to modify the surface roughness of the selected portion” and also “forming a pattern by applying, to the selected portion, the liquid composition”. Figure 2 provides illustration of the intended meaning of these features. None of the cited references appear to disclose or suggest this combination of features.

Furthermore, while Kiguchi discusses plasma treatments (see e.g. col. 11 lines 22-52 in Kiguchi), none of these treatments achieve the steps recited in the claims.

It is respectfully submitted that the claims as amended are not disclosed or suggested by the cited references and are patentable thereover.

Double Patenting

Claims 23-28

The Examiner further rejects Claims 23-28 on the grounds of non statutory obviousness-type

double patenting as being unpatentable over Claims 1-24 of Yamazaki (U.S. 7,189,654) in view of Kiguchi further in view of Di Dio, optionally considering Lewis et al. This rejection is also respectfully traversed.

As explained above, Applicants are amending independent Claims 23 and 26.

In light of this amendment, it is respectfully submitted that there is no double patenting.

Claims 1-6, 16-17 and 23-30

Claims 1-6, 16-17 and 23-30 are rejected on the ground of non statutory obviousness-type double patenting as being unpatentable over Claims 1-16 of U.S. 7,625,493 in view of Kiguchi further in view of Di Dio, optionally considering Lewis et al.

As explained above, Applicants are amending independent Claims 1, 2, 23 and 26.

In light of this amendment, it is respectfully submitted that there is no double patenting.

New Claims

Applicants are also adding new dependent Claims 31 and 32. These claims are supported by, for example, page 20, lines 7-9 in the specification.

As these are dependent claims, they are allowable for at least the reasons discussed above for the independent claims.

Accordingly, it is respectfully requested that these new claims be entered and allowed.

If any fee should be due for these new claims, please charge our deposit account 50/1039.

Conclusion

It is respectfully submitted that the present application is in a condition for allowance and should be allowed.

If any fee should be due for this amendment and/or the new claims, please charge our deposit account 50/1039.

Favorable reconsideration is earnestly solicited.

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Respectfully submitted,

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